

# Product Datasheet

## Histone H3 [Asym-dimethyl Arg2] Antibody - BSA Free NB21-1002

Unit Size: 0.05 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**NB21-1002**

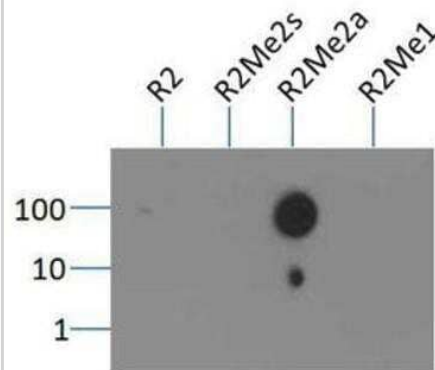
Histone H3 [Asym-dimethyl Arg2] Antibody - BSA Free

<b>Product Information</b>	
<b>Unit Size</b>	0.05 mg
<b>Concentration</b>	0.71 mg/ml
<b>Storage</b>	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
<b>Clonality</b>	Polyclonal
<b>Preservative</b>	0.05% Sodium Azide
<b>Isotype</b>	IgG
<b>Purity</b>	Immunogen affinity purified
<b>Buffer</b>	PBS and 30% Glycerol
<b>Target Molecular Weight</b>	15 kDa
<b>Product Description</b>	
<b>Description</b>	Novus Biologicals Rabbit Histone H3 [Asym-dimethyl Arg2] Antibody - BSA Free (NB21-1002) is a polyclonal antibody validated for use in WB, ICC/IF and CHIP. Anti-Histone H3 Antibody: Cited in 5 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
<b>Host</b>	Rabbit
<b>Gene ID</b>	126961
<b>Gene Symbol</b>	H3C14
<b>Species</b>	Human, Mouse, C. elegans
<b>Reactivity Notes</b>	Predicted to react with many species including rat, chicken, Xenopus, Drosophila, and plant based on 100% sequence homology.
<b>Immunogen</b>	This Histone H3 [Asym-dimethyl Arg2] antibody was raised against synthetic dimethylated peptide surrounding Arginine 2 of human Histone H3 [Asym-dimethyl Arg2] [Swiss Prot# Q71DI3].
<b>Notes</b>	Epi-Plus antibody production in collaboration with Rockland Immunochemicals Inc.
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Dot Blot, Immunocytochemistry/ Immunofluorescence, Chromatin Immunoprecipitation (ChIP)
<b>Recommended Dilutions</b>	Western Blot 1:500, Immunocytochemistry/ Immunofluorescence 1:50-1:100, Dot Blot 1:1000, Chromatin Immunoprecipitation (ChIP)
<b>Application Notes</b>	This Histone H3 [Asym-dimethyl Arg2] antibody is useful for Immunocytochemistry/Immunofluorescence, Dot Blot, and Western Blot where a band is seen ~15 kDa in C. elegans embryo lysate. In ICC/IF, nuclear staining was observed in HeLa cells.

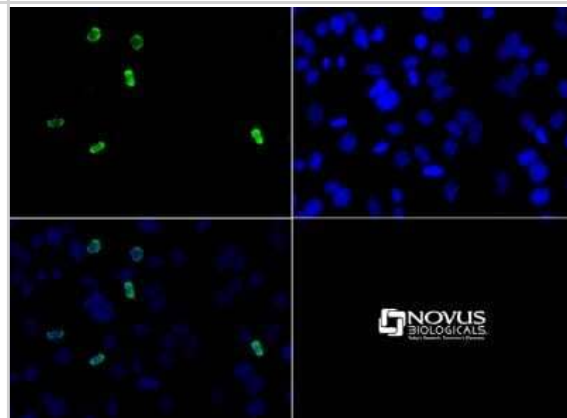


## Images

Dot Blot: Histone H3 [Asym-dimethyl Arg2] Antibody [NB21-1002] - Analysis of Histone H3 [Asym-dimethyl Arg2] in picomoles of peptide.



Immunocytochemistry/Immunofluorescence: Histone H3 [Asym-dimethyl Arg2] Antibody [NB21-1002] - Histone H3 [Asym-dimethyl Arg2] antibody was tested in HeLa cells with DyLight 488 (green). Nuclei were counterstained with DAPI (blue).

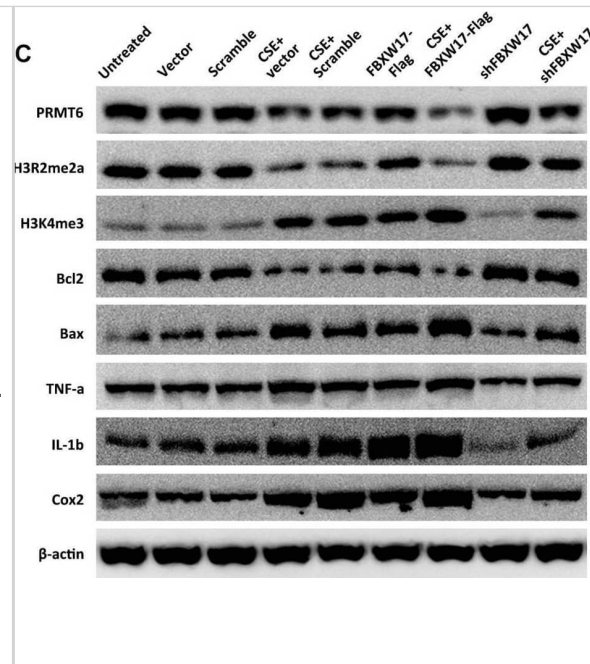


Western Blot: Histone H3 [Asym-dimethyl Arg2] Antibody [NB21-1002] - Analysis of Histone H3 [Asym-dimethyl Arg2] in *C. elegans* embryo lysate. Observed molecular weight is ~15 kDa.

250>  
150>  
100>  
75>  
50>  
37>  
25>  
20>  
15>  
10>



FBXW17/protein arginine N-methyltransferase 6 (PRMT6) signaling involves in cigarette smoke extract (CSE)-induced lung epithelial inflammation and apoptosis. (A) Vector, FBXW17-FLAG plasmids, scramble small hairpin RNA (shRNA), and FBXW17 shRNA were transfected into MLE12 cells separately. Annexin V and PI kits were used to detect the rate of apoptotic cells. Before detection, cells were treated with CSE for 6 h. The "percentage of cells +/- SD" values were shown in all the quadrants of flow cytometry. (B) The plotted data of apoptosis in each group are presented. (C) MLE12 cells were transfected with either overexpressed or knockdown plasmids of FBXW17. Before collection, the cells were treated with 5% CSE for 6 h. Cell lysate was conducted with immunoblotting with indicated antibodies. (D) The plotted PRMT6, H3R2me2a, and Bcl-2 protein expression were shown. (E) The relative protein expression of H3K4me3, Bax, TNF- $\alpha$ , IL-1 $\beta$ , and COX-2 were presented. Data were represented by n = 3 separate experiments. The graph shows mean +/- SD. "□" denotes p < 0.05 between indicated groups. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/33959602>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Li T, He X, Luo L et al. F-Box Protein FBXW17-Mediated Proteasomal Degradation of Protein Methyltransferase PRMT6 Exaggerates CSE-Induced Lung Epithelial Inflammation and Apoptosis *Frontiers in Cell and Developmental Biology* 2021-04-20 [PMID: 33959602] (Chemotaxis, Western Blot, Mouse)

Yue Tao, Qingnian Liu, Rongrong Wu, Changchen Xiao, Cheng Ni, Kan Wang, Wangxing Hu, Zhiwei Zhong, Jing Zhao, Qingju Li, Dan Zhu, Shuhan Zhong, Hong Yu, Wei Zhu, Jinghai Chen, Xinyang Hu, Jian'an Wang Long noncoding RNA LUCAT1 enhances the survival and therapeutic effects of mesenchymal stromal cells post-myocardial infarction *Molecular Therapy. Nucleic Acids* 2021-12-11 [PMID: 35036054]

Futaba Inoue, Kenbun Sone, Kohei Kumegawa, Ryuta Hachijo, Eri Suzuki, Saki Tanimoto, Natsumi Tsuboyama, Kosuke Kato, Yusuke Toyohara, Yu Takahashi, Misako Kusakabe, Asako Kukita, Harunori Honjoh, Akira Nishijima, Ayumi Taguchi, Yuichiro Miyamoto, Michihiro Tanikawa, Takayuki Iriyama, Mayuyo Mori, Osamu Wada-Hiraike, Katsutoshi Oda, Hiromu Suzuki, Reo Maruyama, Yutaka Osuga Inhibition of protein arginine methyltransferase 6 activates interferon signaling and induces the apoptosis of endometrial cancer cells via histone modification. *International journal of oncology* 2024-02-02 [PMID: 38299254]

Kang N, Chen P, Chen Y et al. PRMT6 mediates CSE induced inflammation and apoptosis. *Int. Immunopharmacol.* 2015-01-01 [PMID: 25481537] (WB, Human)

### Details:

Histone H3 [Asym-dimethyl Arg2] / H3R2me2a antibody used for WB on HUVEC cells subjected to the following treatments : Control/no treatment; CSE/treated with 20% cigarette smoke extract 24 h; Flag: transfected with Flag; Flag + CSE; PRMT6-Flag: transfected with PRMT6-Flag; PRMT6-Flag + CSE; S-siRNA: transfected with scrambled siRNA; siRNA: transfected with siRNA targeting PRMT-6 (Fig. 4)

Neault M, Mallette FA, Vogel G et al. Ablation of PRMT6 reveals a role as a negative transcriptional regulator of the p53 tumor suppressor. *Nucleic Acids Res* 2012-10-01 [PMID: 22904064] (WB, Chemotaxis, Mouse)

## Procedures

### Protocol specific for H3R2me2a antibody (NB21-1002)

Histone H3 [Asym-dimethyl Arg2] Antibody:  
Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

\*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.





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### **Products Related to NB21-1002**

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NBP1-71654	alpha Satellite repeat primer
NB21-1002PEP	Histone H3 [Asym-dimethyl Arg2] Antibody Blocking Peptide
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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